I CLAIM AS MY INVENTION:

1. A power source for operating a deflection coil, having two terminals, for an electron beam of an X-ray tube, comprising:

a voltage source having opposite poles;

a bridge circuit having terminals adapted for connection to both terminals of the deflection coil each via one power switch, said power switches connecting said deflection coil terminals in series with the opposite poles of the voltage source;

a current tap that taps a coil current signal proportional to a current through the deflection coil;

an activation comparator connected to said current tap supplied with an activation current signal;

a deactivation comparator connected to said current tap and supplied with a deactivation current signal; and

said activation comparator and said deactivation comparator closing the power switches if said coil current undershoots said activation current signal and opening said power switches if said coil current signal overshoots said deactivation current signal.

2. A power source as claimed in claim 1 wherein said bridge circuit comprises diodes respectively adapted for connection to the terminals of said deflection coil in series with an opposite pole of said voltage source, with one power switch connected therebetween.

3. A power source as claimed in claim 1 comprising an interference suppressor, connected to said activation comparator and to said deactivation comparator, for suppressing interference signals at frequencies corresponding to a

resonant frequency of the deflection coil, to eliminate interferences in signals for switching said power switches.

4. A power source as claimed in claim 1 comprising a deflection current computer that generates said activation current signal and said deactivation current signal dependent on at least one of an X-ray voltage of said X-ray tube, a type of said X-ray tube, manufacturing tolerances of said X-ray tube, aging of said X-ray tube, and known, recurring interfering influences arising during operation of said X-ray tube.

5. A power source as claimed in claim 4 wherein said deflection current computer generates a predetermined activation current signal and a predetermined deactivation current signal upon detection of an abrupt discontinuity of said X-ray voltage.

6. A power source as claimed in claim 4 wherein said deactivation current computer generates at least one of said deactivation current signal and said activation current signal independent of the X-ray voltage upon a start of operation of said X-ray tube.

7. A power source as claimed in claim 4 wherein said deactivation current computer generates at least one of said deactivation current signal and said activation current signal independent of the X-ray voltage upon a end of operation of said X-ray tube.

8. An X-ray device comprising:

an X-ray tube having a cathode, that emits an electron beam, and an anode on which said electron beam is incident, and a deflection coil disposed to interact with said electron beam in a propagation path between said cathode and said anode, said deflection coil having two terminals; and

a power source comprising a voltage source having opposite poles, a bridge circuit having terminals respectively connected to the two terminals of the deflection coil each via one power switch, said power switch connecting said deflection coil terminals in series with the opposite poles of the voltage source, a current tap that taps a coil current signal proportional to a current through the deflection coil, an activation comparator connected to said current tap supplied with an activation current signal, a deactivation comparator connected to said current tap and supplied with a deactivation current signal, and said activation comparator and said deactivation comparator closing the power switches if said coil current undershoots said activation current signal and opening said power switches if said coil current signal overshoots said deactivation current signal.

9. An X-ray device as claimed in claim 8 wherein said bridge circuit comprises diodes respectively adapted for connection to the terminals of said deflection coil in series with an opposite pole of said voltage source, with one power switch connected therebetween.

10. An X-ray device as claimed in claim 8 comprising an interference suppressor, connected to said activation comparator and to said deactivation comparator, for suppressing interference signals at frequencies corresponding to a resonant frequency of the deflection coil, to eliminate interferences in signals for switching said power switches.

11. An X-ray device as claimed in claim 8 comprising a deflection current computer that generates said activation current signal and said deactivation current signal dependent on at least one of an X-ray voltage of said X-ray tube, a type of

said X-ray tube, manufacturing tolerances of said X-ray tube, aging of said X-ray tube, and known, recurring interfering influences arising during operation of said X-ray tube.

12. An X-ray device as claimed in claim 11 wherein said deflection current computer generates a predetermined activation current signal and a predetermined deactivation current signal upon detection of an abrupt discontinuity of said X-ray voltage.

13. An X-ray device as claimed in claim 11 wherein said deactivation current computer generates at least one of said deactivation current signal and said activation current signal independent of the X-ray voltage upon a start of operation of said X-ray tube.

14. An X-ray device as claimed in claim 11 wherein said deactivation current computer generates at least one of said deactivation current signal and said activation current signal independent of the X-ray voltage upon a end of operation of said X-ray tube.